

Natural Resources

The preservation, enhancement, and restoration of important environmental resources are pivotal community issues. The Natural Resources Chapter provides guidance for the management of sensitive areas, such as steep slopes, wetlands, flood plains and other significant natural habitats. The enhancement of waterways is a central focus of the *Comprehensive Plan*, since the City is at the confluence of two rivers and includes several creeks and streams.

Figure 3-1, Major Natural Resource Protection, indicates the general locations of some of the major resources to be protected, such as rivers, creeks, flood plains, lakes, wetlands, steep slopes, and major wooded areas. (See also Land Use Chapter and Parks System Chapter.)

Key Issues

1. **River and Creek Shoreline Land Use:** What pattern of land use should the City encourage along the rivers and creeks?
2. **Public Access to Rivers and Creeks:** What should the City do to ensure appropriate public access to rivers and creeks?
3. **Steep Slopes:** What should the City do to ensure effective control of development for steep slopes? To what extent does the City need to adopt local development regulations for steep slopes that supersede the slope controls that are mandated in the *Chippewa Falls-Eau Claire Urban Sewer Service Plan*?
4. **Riverbanks:** What additional protection measures, such as regulations addressing building or parking setbacks, tree cutting or signage, should the City adopt for its riverbanks?
5. **Highly Productive Farmlands:** What should the City do to minimize the loss of prime farmlands and significant agricultural assets from conversion to semi-rural lot housing accompanying premature urbanization?

Goal and Objectives

Goal: Protect or improve steep slopes, wetlands, and streams in Eau Claire to promote sustainable development, ecological responsibility, quality of life, and economic development.

Objective 1 – Water Resources: Protect and improve the quality of surface and ground water in and near Eau Claire.

Objective 2 – Wildlife Habitat: Protect the key remaining small tracts of wildlife habitat and restore or improve the quality of other locations.

Objective 3 – Soil Resources: Safeguard soils by reducing soil erosion, especially near streams and wetlands, and by promoting compact urban growth.

Natural Resources Policies

Objective 1 – Water Resources

Protect and improve the quality of surface water and ground water in and near Eau Claire.

Eau Claire is rich in water resources, and protecting those streams and aquifers is a major responsibility. The City has been following a 1992 surface water plan and recently improved its water quality regulations to conform to state and federal guidelines.

Policies:

1. **Storm Water Plan Implementation:** Continue to refer to the recommendations of its *1992 Comprehensive Storm Water Management Plan* when making decisions in the subject areas of water volume, rate, storage and quality, and erosion control. That plan addresses the watersheds of the Chippewa and Eau Claire Rivers and Sherman, Lowes, and Otter Creeks.
2. **Storm Water Plan Updates:** Update the *1992 Comprehensive Storm Water Management Plan* by conducting additional sub-area studies in the Lowes Creek and Otter Creek watersheds, which were partially addressed in the 1992 plan, along with a study west of County Highway TT in the Town of Union, which was not included in the 1992 plan but which is a location of planned urbanization under this *Comprehensive Plan*.

Review the calculations for the Sherman Creek watershed using more accurate information about current and planned land use.

3. **Water Quality Protection:** Continue to safeguard or improve water quality in its watersheds by following the provisions of the Water Pollution Discharge Elimination System (WPDES) Municipal Storm Water Permit issued by the Wisconsin Department of Natural Resources under NR 216 of the Wisconsin Administrative Code. The elements of that permit address:
 - Legal authority to control storm water runoff from new development
 - Monitoring program
 - Storm water management
 - catch basins
 - leaf collection

- street sweeping
- structural control maintenance
- roadway maintenance
- nutrient management on City properties
- Construction site runoff
- Flood control devices
- Illicit connections and discharges
- Industrial and high-risk runoff
- An information and education program
- Toxic spills
- Reduction of the discharge of Total Suspended Solids to surface waters
- Assessment of controls
- An annual report

In 2004, the City of Eau Claire expanded the present requirements for erosion control from construction sites (Chapter 16.36.040, Standards for Public and Private Development, Storm Drainage), using the DNR model ordinance. That section was amended to include:

- That a construction control plan be prepared for each development or redevelopment site of one acre or greater in size, as required under Wisconsin Administrative Code NR 151, Construction Site Performance Standard for New Development and Redevelopment. That regulation requires the use of Best Management Practices to reduce by 80% the sediment load carried in water runoff.
- Flexibility for City staff to modify release rates based on downstream conditions, such as limited conveyance system capacity, erosion potential, and/or regional storm water facilities.
- Requirements for grading plans to regulate runoff during and after individual lot construction and landscaping.
- Any Best Management Practices that are required under the NR 216 water quality permit.

Prior to March 31, 2005, the City prepared and submitted to the Wisconsin DNR a plan to clarify the City's storm water regulatory program.

4. **Regional Surface Water Management Plan:** Collaborate with nearby communities, Eau Claire and Chippewa Counties, and the Wisconsin DNR to prepare and adopt a storm water management plan for all of the watersheds in the metropolitan area. That plan should include a runoff and ponding model and recommendations for restoring or improving wetlands. The provisions of Eau Claire's state surface water drainage permit could be incorporated by reference.
5. **River and Stream Shoreline Protection:** Preserve and restore natural conditions to the extent practical, especially the rivers and streams of the City, in order to filter runoff, reduce erosion, and provide habitat for stream species.

A natural, vegetated stream corridor and lowland conservancy area should be maintained along the edges of streams or wetlands to minimize erosion, stabilize

the bank, protect water quality, maintain water temperature at natural levels, and preserve fish and wildlife habitat. The natural vegetation should extend a minimum of 25 feet from the ordinary high water mark of a stream or wetland.

Work with the Department of Natural Resources to protect the banks and flood plain of the Chippewa and Eau Claire Rivers, as well as Sherman, Lowes and Otter Creeks by enforcing its current flood plain regulations, using natural stream edge protection techniques as described above and by acquiring additional land for public open space. (See also the Parks System Chapter and the Land Use Chapter.)

Use natural means of protecting the edge of the Chippewa and Eau Claire Rivers and other shorelines in locations where wake action needs do not dictate otherwise. The use of stone riprap and concrete walls will be minimized because they are unattractive and do not provide any natural habitat or runoff filtration. The aims for restoring stream banks should be to introduce new plantings or protect existing native plants that will provide an integrated series of benefits:

- Stabilize the mechanics of slopes;
- Reduce soil erosion;
- Improve water quality;
- Create and connect wildlife habitat;
- Enhance riverbank aesthetics.

Update the City's Greenway Guidelines to ensure that development along the waterways safeguards the natural environment, promotes high quality design, and enhances public access to and along the waterways. A setback of 30 feet from the top of the bank should be a minimum requirement for new development along the waterways.

6. **Greenway Design:** Consider environmental issues in the design of linear public parks and other open space along streams or bicycle paths. Determine the basis of any greenway width by specific environmental standards, such as slope percentage, erodible slopes, soil conditions, wetlands, flood plain locations and areas of quality woodlands with their size, area, and species identified. Carefully align bicycle paths in a greenway so as to minimize disruption of the ecology of the site.
7. **Wetland Restoration:** Restore filled or degraded wetlands when feasible during redevelopment projects for the sake of water quality, rate control, and neighborhood amenity.
8. **River Flood Plain Management:** Continue to strictly enforce river and stream flood plain regulations, which are part of the Zoning Code. Land use plans and site development plans will be drawn to protect the streams and accomplish appropriate waterfront development.
9. **River Flood Plain Property Acquisition:** Consider acquiring land that is within the official 100-year flood plain in locations that are planned as riverfront parks or potential redevelopment sites. The acquisition should preferably be through voluntary sale.
10. **Groundwater Contamination:** Continue to coordinate with the Wisconsin Department of Natural Resources and the United States Environmental Protection

Agency to implement the remedial action plan for containing and reducing the groundwater threat to the Eau Claire Municipal Well Field.

11. **Infiltration Standards:** Adopt surface water infiltration standards that are consistent with Wisconsin DNR requirements. Consider the percolation rate of the soil and maintenance; do not increase the potential for groundwater contamination or groundwater mounding.
12. **Lawn Fertilizers:** Support efforts by units of government and/or private advocacy groups to reduce or eliminate phosphorus as a source of water pollution in lawn fertilizer in the region or the state.

Objective 2 – Wildlife Habitat

Protect the key remaining small tracts of wildlife habitat and restore or improve the quality of other locations.

Wildlife habitat is limited in this urban area, but key locations, such as around Half Moon Lake and along river and stream corridors, can be protected.

Policies:

1. **Native Species of Vegetation:** Seek opportunities for the Department of Parks and Recreation to restore native vegetation in portions of some parks. In certain areas within private development, such as near wetlands, use native vegetation in an attractive and economical manner to enhance wildlife habitat. Suggest and encourage private site designers to adopt this practice and advise them on appropriate species.
2. **Greenways:** The existing and planned public open space along portions of Otter, Lowes, and Sherman Creek, the Chippewa and Eau Claire Rivers, and other streams around Eau Claire can act as corridors for the protection and movement of some species of animals. Thus, try to manage them to retain uninterrupted vegetative cover and a high percentage of native vegetation. To the extent feasible, acquire and protect additional lands through easements along those greenways beyond what may be needed for recreation and trails in order to enhance their function as wildlife corridors.
3. **Urban Forest:** Continue to replace trees that have been lost or removed along City streets and in parks. Prepare an inventory and map for the trees in those locations.

Continue the practice of requiring land developers to install trees in the street right-of-way behind the curb along all residential streets. Locate private utilities (electricity, cable television, gas, and telephone services) near the outside of the right-of-way or in an easement just outside the right-of-way to leave the boulevard open for trees.

Also install (or require developers to install) trees along arterial roads, including in commercial or industrial districts, according to a comprehensive tree-planting plan.

Objective 3 – Soil Resources

Safeguard soils by reducing soil erosion, especially near streams and wetlands, and by promoting compact urban growth.

Reducing soil erosion supports the objective of protecting water quality.

Policies:

1. **Steep Slopes:** Prepare and adopt an ordinance that regulates development or alteration of steep slopes and coordinate it with the provisions of its construction site controls under its WPDES storm water permit. Development includes buildings, parking lots, and other site improvements that involve alterations to the natural grade of the property.

The steep slope ordinance may help reduce soil erosion, reduce the rate of water runoff, and lessen negative visual effects. It may be written as a “floating zone,” which may be applied wherever slope conditions meet specified standards, such as 12 to 20 percent or greater than 20 percent. It will be useful for purposes of education and understanding to show members of the City Plan Commission and City Council several examples of slopes in the 12 to 20 and greater than 20 percent range in natural settings, developed settings, and roads. Also, examples of both proper and improper slope development should be shown.

2. **Erodible Slopes:** Manage public and private development near the high banks and steep slopes of creeks and rivers to avoid erosion.

As required in the WPDES storm water permit, the City will enforce the Best Management Practices and procedures that prevent erosion and protect the appearance of steep slopes City-wide.

3. **Other Erodible Sites:** Surface water runoff and wind erosion from construction sites will remain the largest source of soil loss and a problem for water quality at certain times. Thus, continue to enforce requirements for erosion control at such locations.

4. **Prime Farmlands:** Minimizing the loss of land that is classified by government agencies as prime for agriculture is one of several considerations in this *Plan*. The City of Eau Claire seeks to minimize the loss of this irreplaceable natural resource by promoting compact urban development and discouraging large-lot sprawl outside its borders.

The regulatory techniques advocated by this *Plan* to protect farmland include:

- Zoning land for no more than 4 houses per 40 acres (small lots, low density);
- Clustering houses onto sites that are not prime for farming, are wooded, or are difficult to farm because of size or access.

(Refer also to the Land Use Chapter, Objective 3, Perimeter and Regional Growth.)